
 Preliminary Remedial Action Area

 Overall Dredge Area

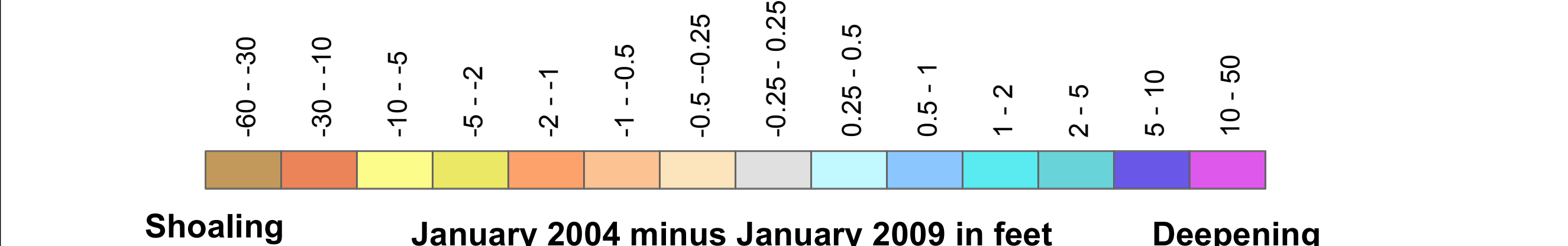
This drawing presents a comparison of multibeam bathymetric surveys conducted by David Evans and Associates, Inc.

The difference analysis was generated from a 3-foot difference grid of multibeam bathymetry. The 3-foot grid values of the January 2009 survey were subtracted from the January 2004 survey to produce the difference grid.

The hillshade was generated from the January 2009 survey.

Depths were acquired with a Reson bathymetric sonar, integrated with a positioning and motion reference system.

Aerial image is provided for reference only. It may not be suitable for legal, engineering, or surveying purposes.





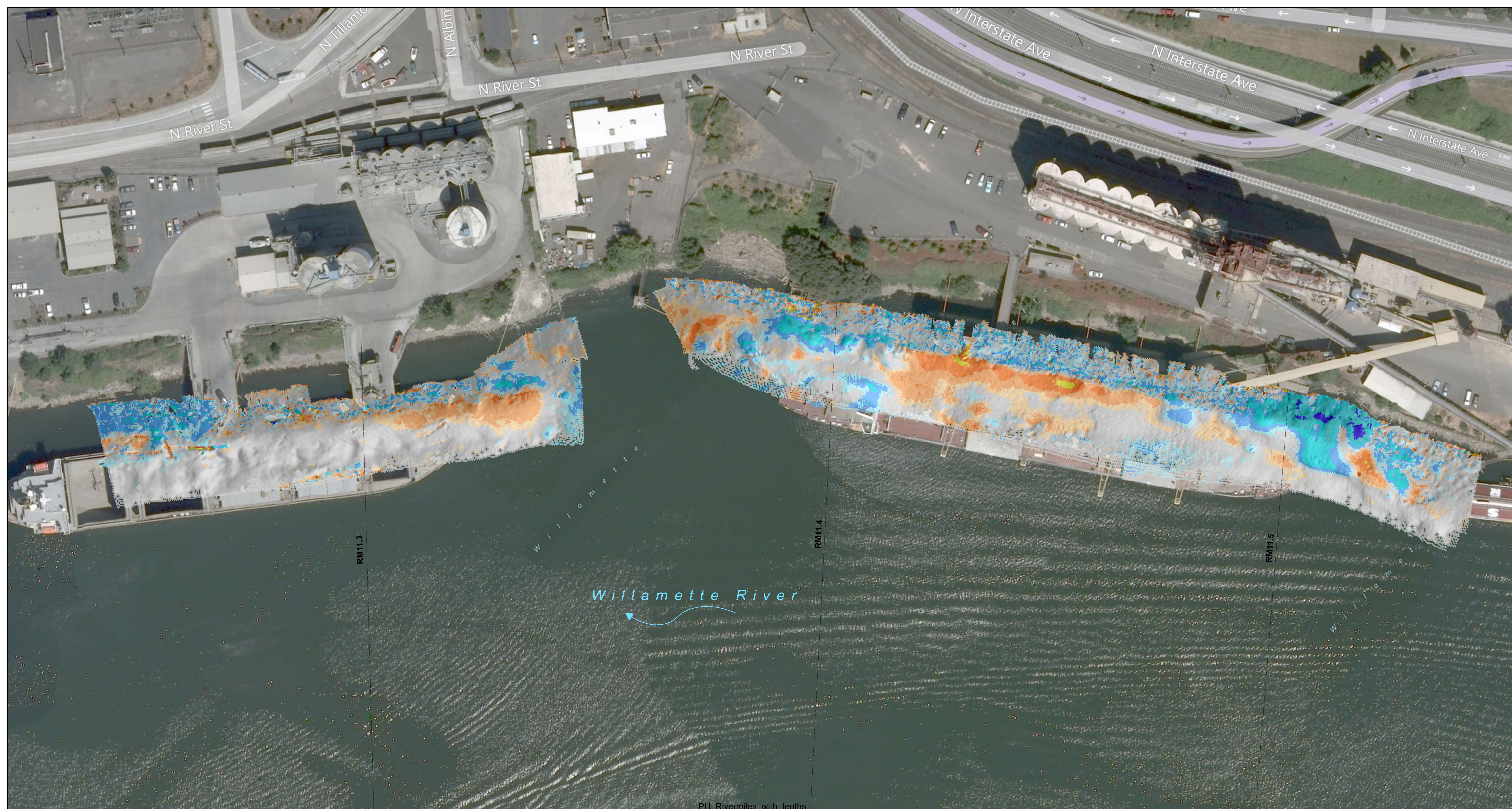
DAVID EVANS
AND ASSOCIATES, INC.
MARINE SERVICES



GSI
Water Solutions, Inc.



CITY OF PORTLAND, OREGON
1851



0 50 100 200 Feet

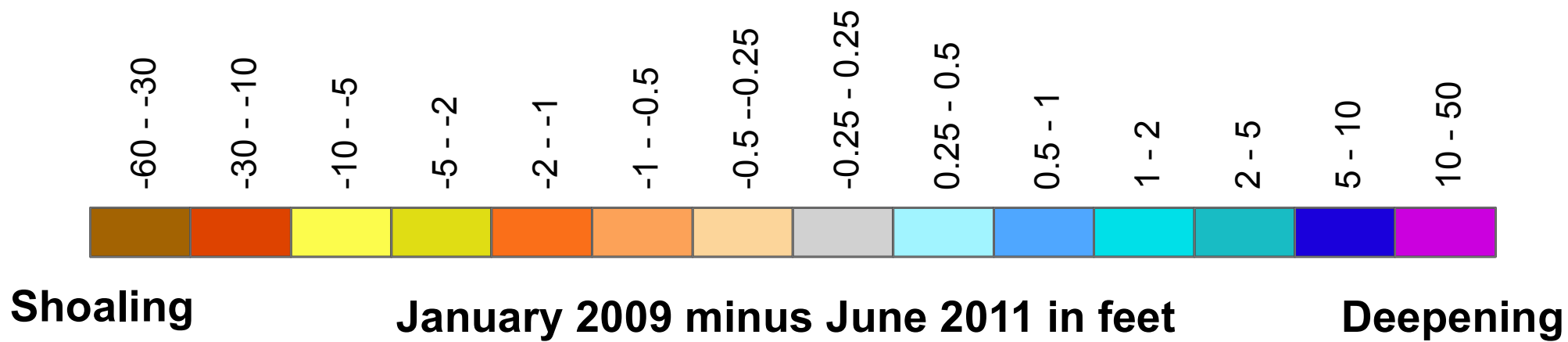
This drawing presents a comparison of multibeam bathymetric surveys conducted by David Evans and Associates, Inc.

The difference analysis was generate from a 1.6 foot and 3 foot difference grid of multibeam bathymetry. The 1.6 foot grid values of the June 2011 survey were subtracted from the 3 foot grid values of the January 2000 survey to produce the difference grid. Note that the grid cells are not exactly aligned and are of different sizes which may increase uncertainty.

The hillshade was generated from the June 2011 survey with an azimuth of 315° and a zenith of 45°.

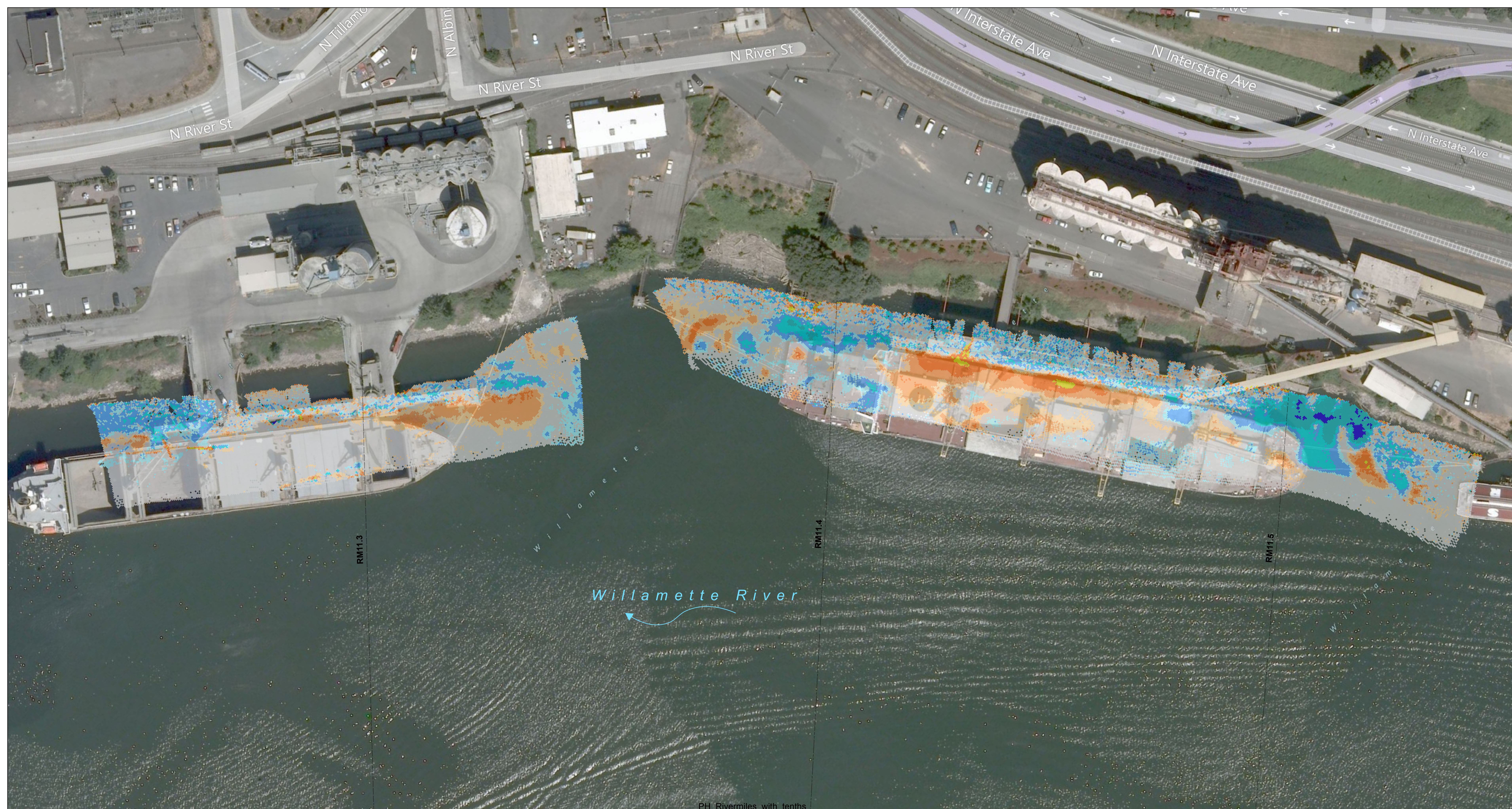
Depths were acquired with a Reson bathymetric sonar, integrated with a positioning and motion reference system.

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DAVID EVANS
AND ASSOCIATES, INC.
MARINE SERVICES





0 50 100 200 Feet

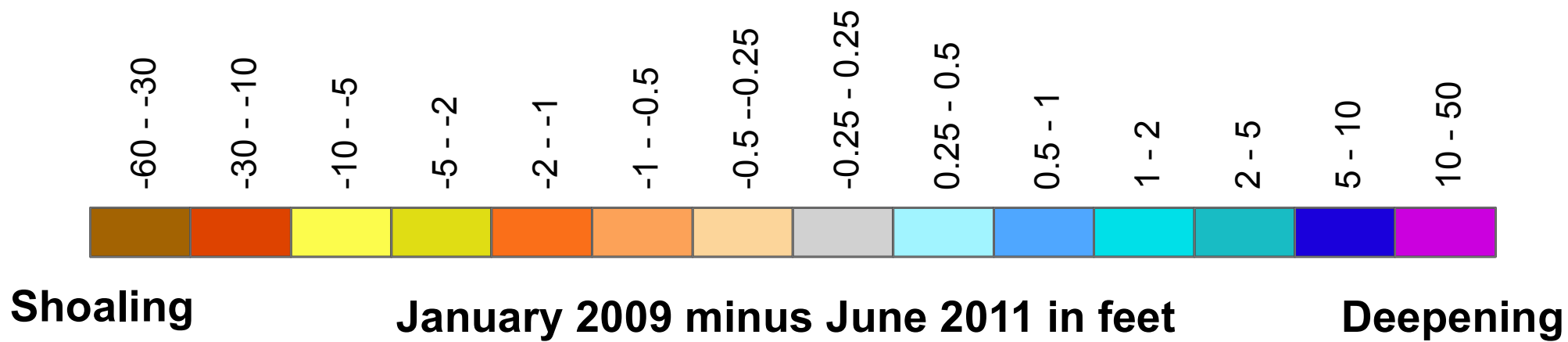
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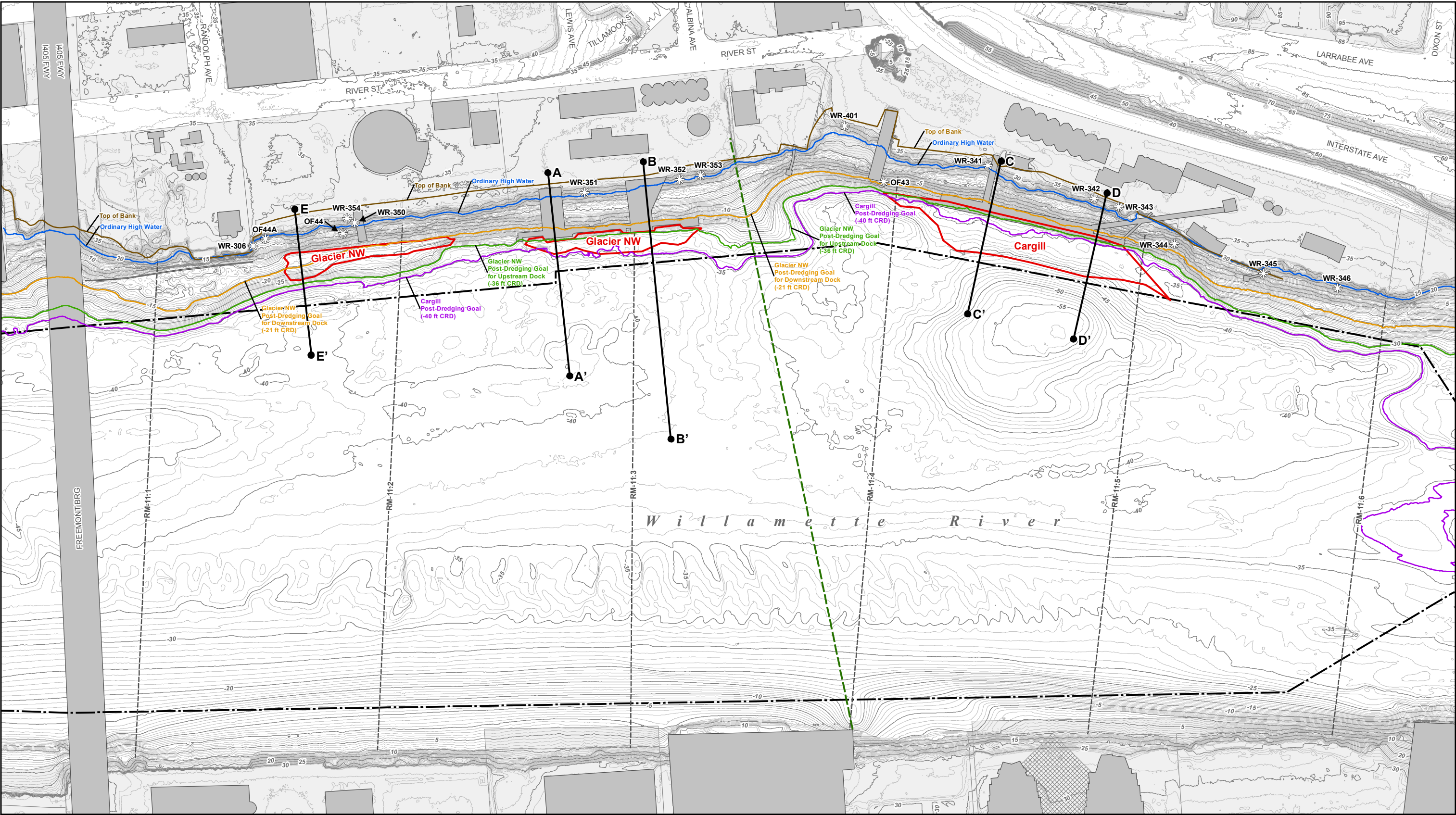
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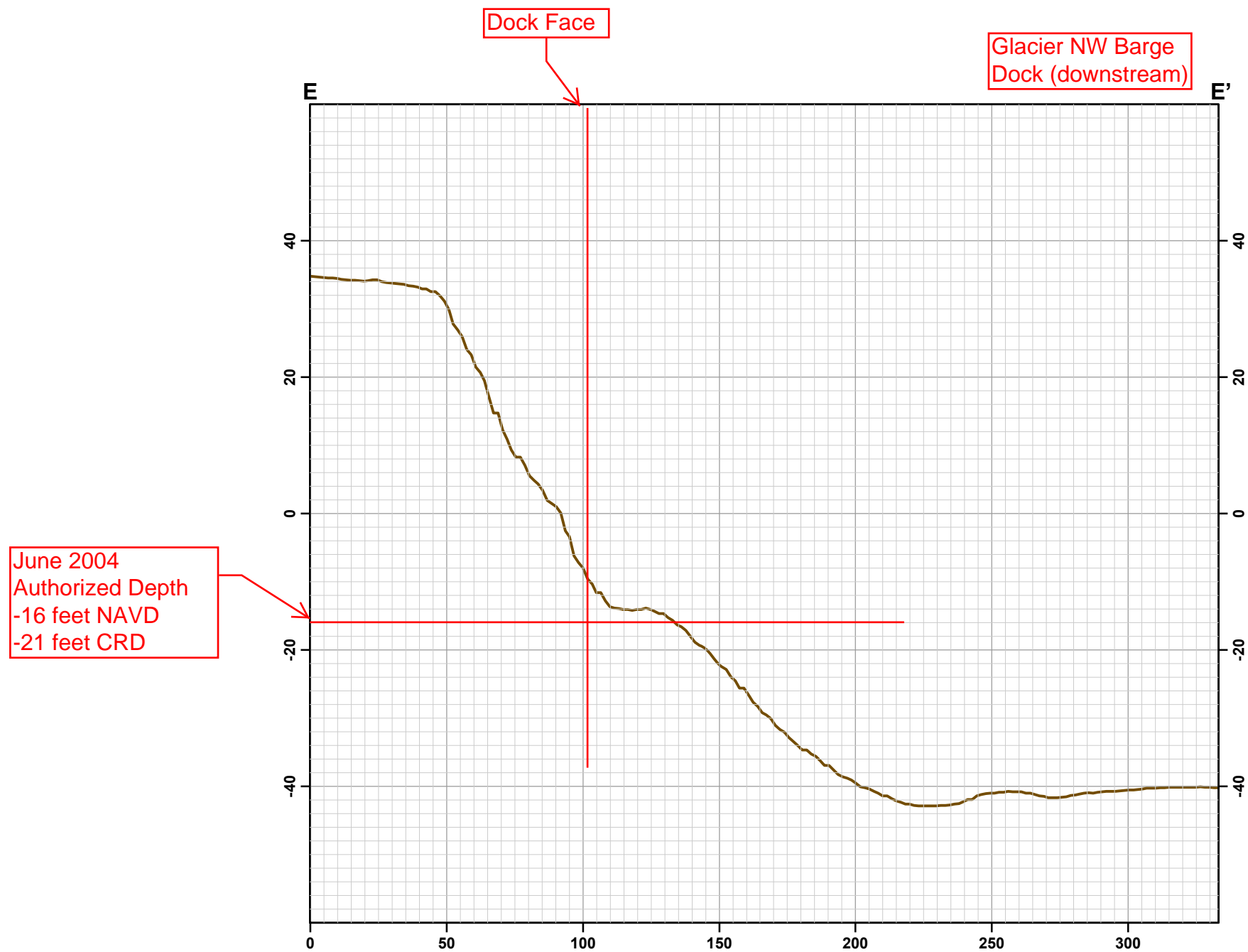
Depths were acquired with a Reson bathymetric sonar, integrated with a positioning and motion reference system.

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NOTES Projection: Oregon State Plane North Datum: North American Datum of 1983 Drawing Date: July 21, 2011	LEGEND <ul style="list-style-type: none">Historical Maintenance Dredge AreaCargill Post-Dredging Goal (-40 ft CRD)Glacier NW Post-Dredging Goal for Upstream Dock (-36 ft CRD)Glacier NW Post-Dredging Goal for Downstream Dock (-21 ft CRD)	Other Data and Features <ul style="list-style-type: none">OutfallCOE Navigation ChannelBuilding/StructureTax Lot	<ul style="list-style-type: none">Cross Section LocationCable Crossing (approximate)Top of BankOrdinary High WaterRiver Mile (RM)	<ul style="list-style-type: none">5 foot Contour (NAVD88)1 foot Contour (NAVD88)	 0 100 200 300 Scale in Feet	 GSI Water Solutions, Inc.	DREDGE AREAS CARGILL AND GLACIER NW River Mile 11 East WRDA Design Willamette River Portland, Oregon
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NOTES
Drawing Date: July 21, 2011

LEGEND
— Ground Surface

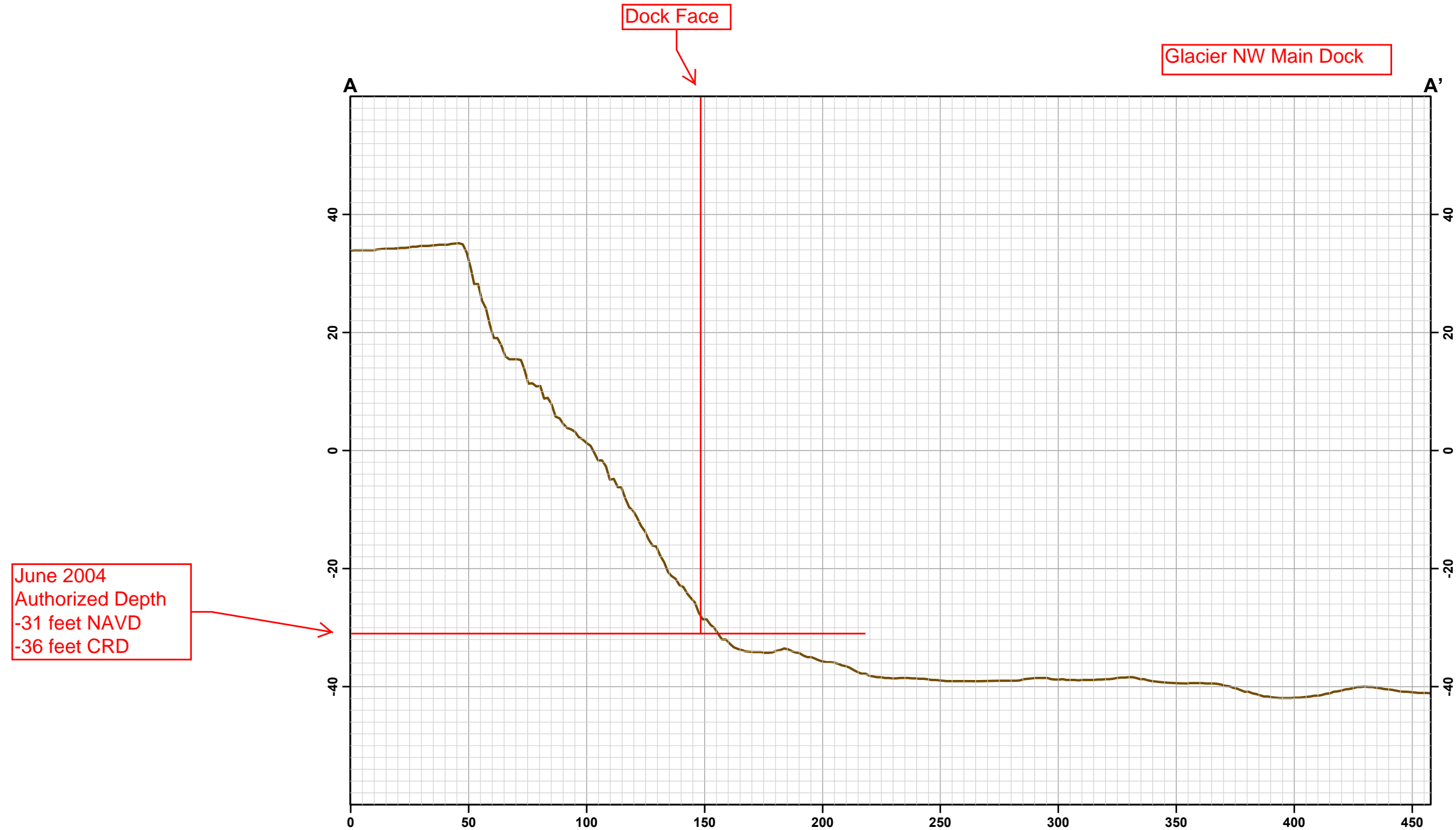
SCALE
20 feet
2.5x Vertical
Exaggeration
50 feet



**CROSS SECTION
E-E'**

**River Mile 11 East
WRDA Design**

**Wilamette River
Portland, Oregon**



NOTES
Drawing Date: July 19, 2011

LEGEND
— Ground Surface

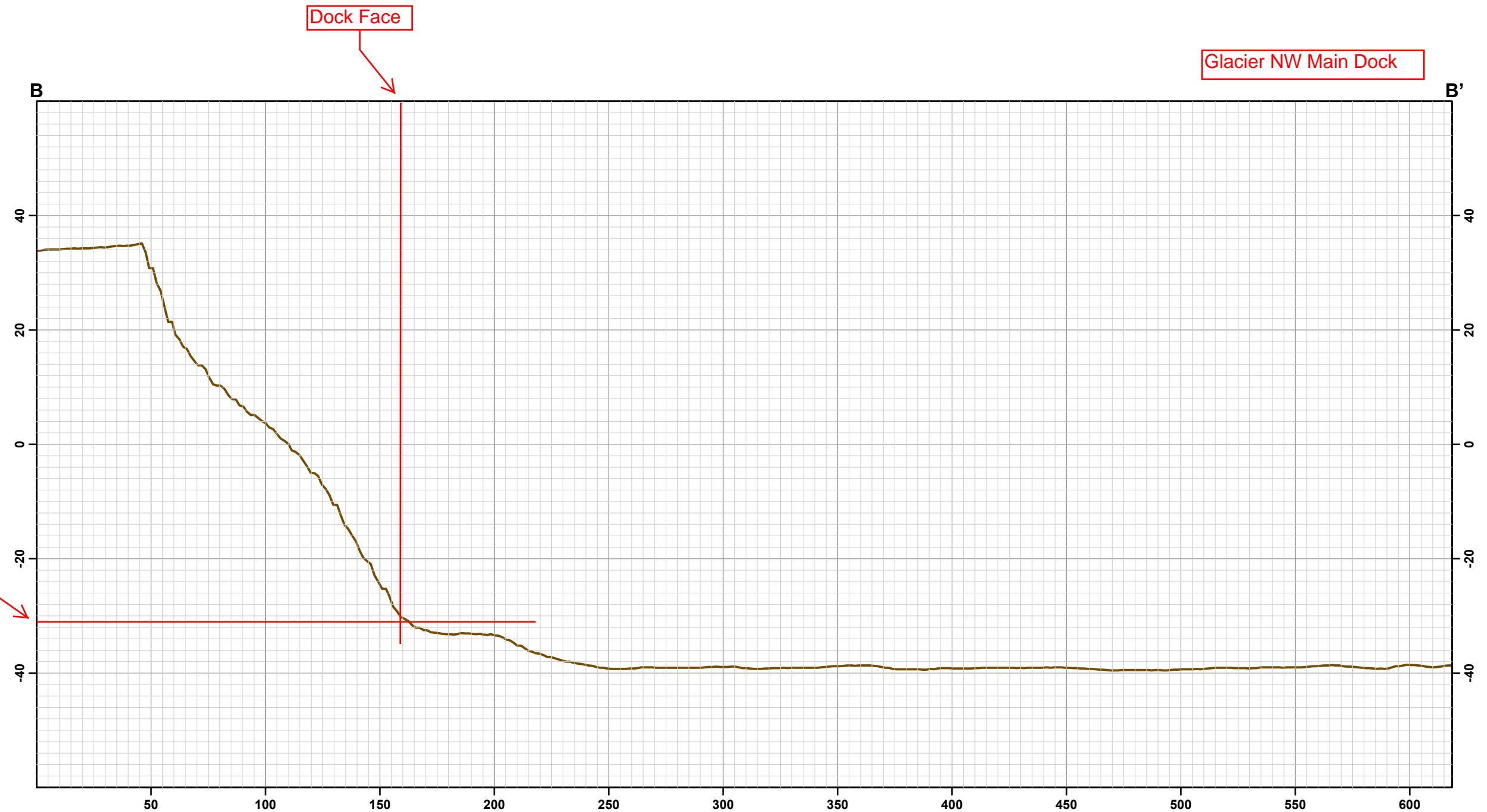
SCALE
20 feet
2.5x Vertical
Exaggeration
50 feet



**CROSS SECTION
A-A'**

River Mile 11 East
WRDA Design

Wilamette River
Portland, Oregon



NOTES
Drawing Date: July 19, 2011

LEGEND
— Ground Surface

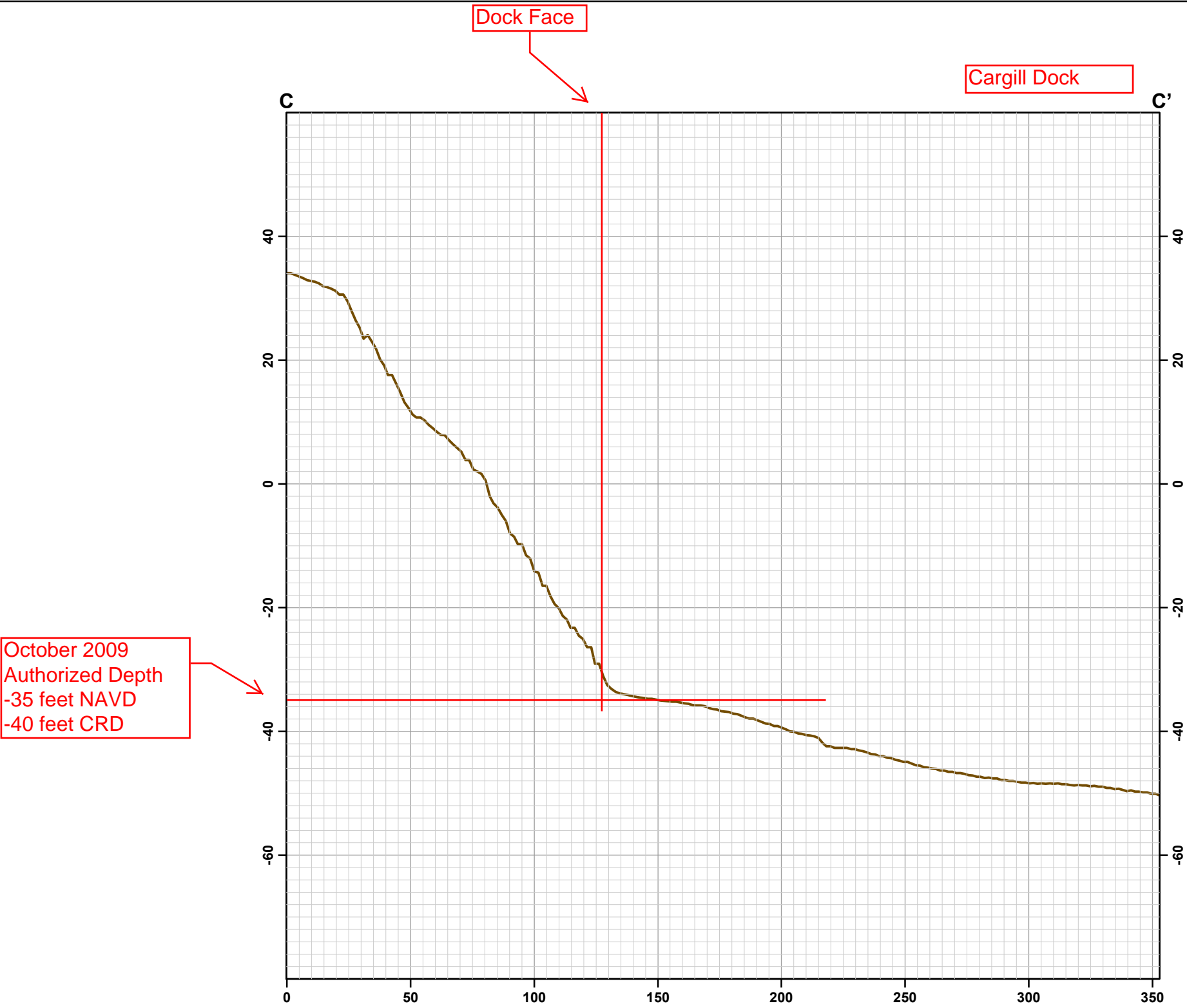
SCALE
20 feet
2.5x Vertical
Exaggeration
50 feet



**CROSS SECTION
B-B'**

River Mile 11 East
WRDA Design

Wilamette River
Portland, Oregon



NOTES
Drawing Date: July 19, 2011

LEGEND
— Ground Surface

SCALE
20 feet
2.5x Vertical
Exaggeration
50 feet

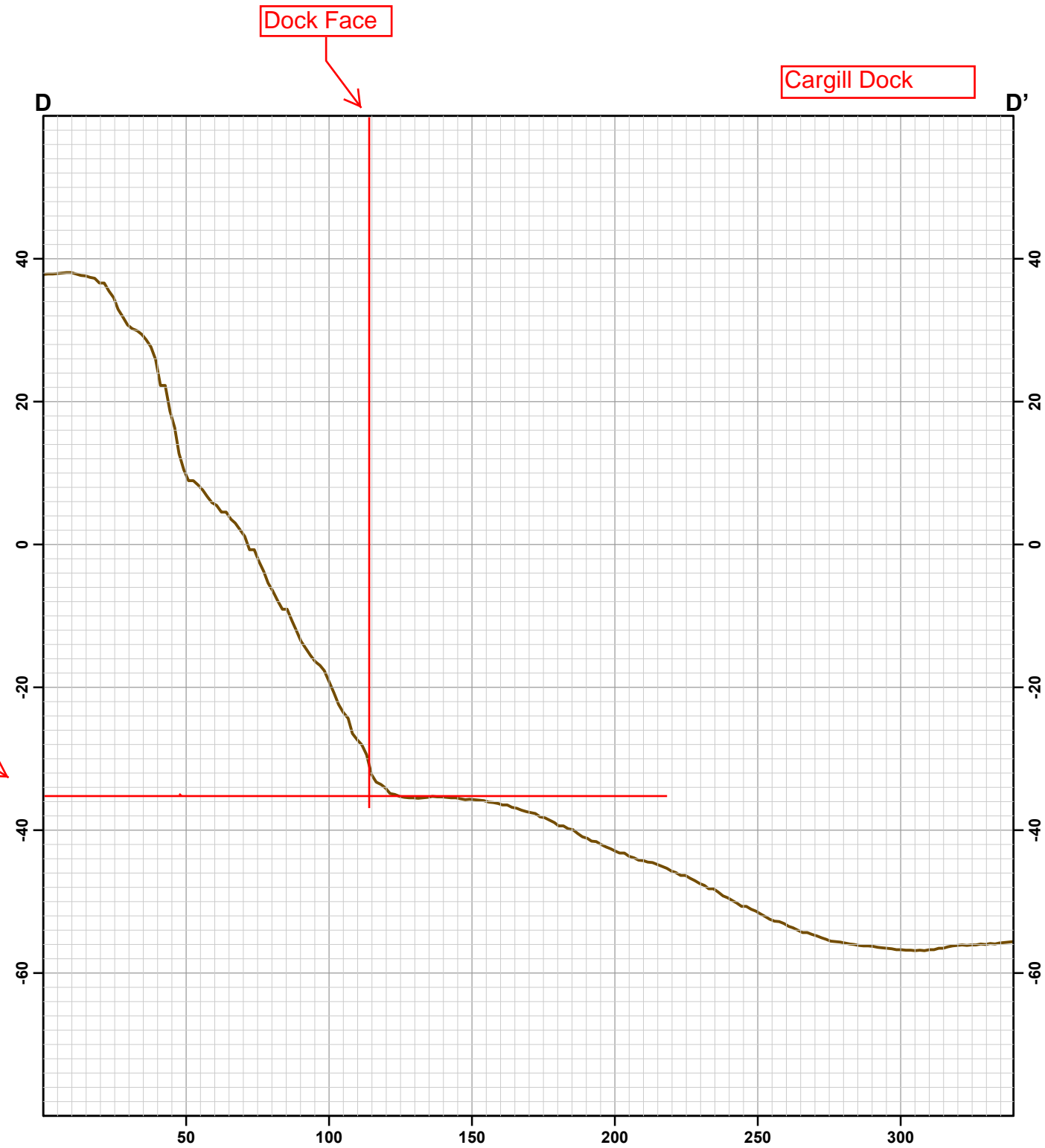


**CROSS SECTION
C-C'**

**River Mile 11 East
WRDA Design**

**Wilamette River
Portland, Oregon**

October 2009
Authorized Depth
-35 feet NAVD
-40 feet CRD



NOTES
Drawing Date: July 19, 2011

LEGEND
— Ground Surface

SCALE
20 feet
2.5x Vertical
Exaggeration
50 feet



**CROSS SECTION
D-D'**

River Mile 11 East
WRDA Design

Wilamette River
Portland, Oregon